HPP PROJECT DESCRIPTION

PROJECT NUMBER:
01330

PROJECT TITLE:
Modeling Support and Examination of Census Transportation Planning Package

PRINCIPAL INVESTIGATOR:
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PROJECT OBJECTIVE:
The research objective is to provide technical support and training on the use of urban transportation modeling packages and data necessary to operate the models. The urban transportation modeling packages that will be supported through this effort include TRANPLAN, CORSIM and possibly, TransCAD. The Census Transportation Planning Package (CTPP) will be examined as potential data to support the models.

PROJECT ABSTRACT:
Metropolitan Planning Organizations (MPOs) are responsible for all traffic modeling and traffic forecasting, then use this information, in cooperation with the State Department of Transportation, to develop the areas Transportation Improvement Plan (TIP), a five-year plan of needed roadway repair, improvement, or construction. This research proposal contains three general themes focusing on improving transportation planning and the management of a community's transportation system. First, regarding TRANPLAN, this software package is difficult to learn and understand the basic operation for planning purposes. The second general theme of this research proposal will examine the difference between regional and local traffic modeling and look at developing a regional-to-local modeling system that can allow a similar model to be used for difference levels of analysis. The intended regional-to-local modeling system proposed consists of TRANPLAN, regional forecasting tool currently being used, and CORSIM, a local network micro-simulation package. The final theme is an evaluation of the Census Transportation Planning Package to support data necessary for modeling.

PROJECT TASK DESCRIPTIONS:
Traffic Modeling Support
        Task 1. Identify Needs for Alabama Cities.
        Task 2. Prepare Educational Material.
        Task 3. Provide the Workshops at Convenient Times and Locations.
Regional-to-Local Traffic Modeling

Task 1. Develop Interface between TRANPLAN and CORSIM.
Task 2. Beta Test the Interface.
Task 3. Develop Final Interface and Documentation.
CTPP Examination
Task 1. Study CTPP focusing on the Needs for Alabama Cities.
Task 2. Prepare Educational Material.
Task 3. Provide the Workshops at Convenient Times and Locations.

MILESTONES AND DATES:
The project should begin on September 1, 2001 and end on August 31, 2002. Beta test
versions of the software will be made available by January 2002 to allow substantial time
for user evaluations.

TOTAL BUDGET:
One-year project; UAH $14,000; UTCA $50,000; ALDOT $36,000

STUDENT INVOLVEMENT:
The students hired to work on this research project will be responsible for assisting in the
development of the interface between TRANPLAN and CORSIM, participate in
workshop activities related to transportation modeling, and help with technology transfer
activities.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
A portion of this research project serves as an extension of a currently funds UTCA and
ALDOT joint venture to provide training opportunities and technical support to
Alabama's urban transportation planners. The existing project, scheduled to conclude
June 30th, has been responsible for several state-wide workshops and individual training
sessions as well as the preparation of travel model software to combine TRANPLAN
with ArcView (a commonly used desktop GIS software).

TECHNOLOGY TRANSFER ACTIVITIES:
The technology transfer activities related to this proposal will be evident through
scheduled workshops and individual training sessions related to transportation modeling
(with TRANPLAN, CORSIM, and possibly TransCAD). The distribution of software,
enabling transportation planners to combine TRANPLAN and CORSIM, essentially a
regional-to-local travel modeling system. And, the results of the database investigation
will be presented to the Alabama Department of Transportation and transportation
planners to increase their understanding of how the system can improve their ability to
develop Transportation Improvement Plans.

POTENTIAL BENEFITS OF THE PROJECT:
The potential benefit the work being proposed is three-fold. First, the continued
workshops will provide transportation planners and engineers employed at Alabama
cities a mechanism to be educated on the specifics of travel demand modeling, and the
integration of these models with GIS. Second, this work will develop an interface and
documentation allowing Alabama cities to switch between regional and local modeling.

Finally, this project will assist Alabama planners and engineers in understanding the role of the CTPP in their organization.

TRB KEYWORDS:

Traffic Modeling, Database Management, TIP